

WHAT IS CLAIMED IS:

Sub C17

1. A method for treating the surface of an aluminum alloy high-temperature processed article, comprising heating an aluminum alloy containing Mg at a high temperature of 200°C or above, etching the surface with an aqueous solution containing a chelating agent, and then carrying out hydration oxidation treatment.

2. A method for treating the surface of an aluminum alloy high-temperature processed article, comprising heating an aluminum alloy containing Mg at a high temperature of 200°C or above, etching the surface with an aqueous solution containing a chelating agent, and then carrying out coating type chromating.

3. A method for treating the surface of an aluminum alloy high-temperature processed article, comprising heating an aluminum alloy containing Mg at a high temperature of 200°C or above, etching the surface with an aqueous solution containing a chelating agent, and then carrying out anodizing.

4. A method for treating the surface of an aluminum alloy high-temperature processed article, comprising

heating an aluminum alloy containing Mg at a high temperature of 200°C or above, etching the surface with an aqueous solution containing a chelating agent, and then carrying out alternating current electrolysis in an aqueous alkali solution.

5. The method according to any one of claims 1 to 4, wherein the article thus surface-treated is post-treated by coating.

6. A method for treating the surface of an aluminum alloy high-temperature processed article, comprising heating an aluminum alloy containing Mg at a high temperature of 200°C or above, etching the surface with an aqueous solution containing a chelating agent, and then carrying out coating.

*Sub. Br* 7. The method according to any one of claims 1 to 4, wherein said chelating agent is selected from the group consisting of ethylenediaminetetraacetic acid or an alkali metal salt thereof and an alkali metal salt of picolinic acid.

8. The method according to claim 7, wherein said chelating agent is disodium ethylenediaminetetraacetate.

*Sub. B3* → 9. The method according to any one of claims 1 to 4, wherein said chelating agent is in concentration of 0.005 mol/lit.

*Sub. C2* → 10. The method according to claim 9, wherein said chelating agent is in a concentration of from 0.005 mol/lit to 0.5 mol/lit.

*Sub. B4* → 11. The method according to any one of claims 1 to 4, wherein said aqueous solution further contains an amine compound.

12. The method according to claim 11, wherein said amine compound is triethanolamine.

*Sub. B5* → 13. The method according to any one of claims 1 to 4, wherein said etching is carried out at a temperature of from 40°C to 90°C for 3 seconds to 30 minutes.

14. The method according to any one of claims 1 to 4, wherein said Mg is in a content of 2% by weight or more.

15. The method according to claim 1, wherein said

said Mg is in a content of 2% by weight or more, and said hydration oxidation treatment is carried out using a treating solution having 500 ppm or less of sulfuric acid radical ion concentration, 100 ppm or less of phosphoric acid radical ion concentration, 200 ppm or less of an alkali metal salt concentration and 200 ppm or less of a heavy metal salt concentration, has a pH of 6 to 8 and has a bath temperature of from 80°C to 100°C.

16. The method according to claim 4, wherein said said Mg is in a content of 2% by weight or more, and said alternating current electrolysis is carried out in an aqueous alkali solution having a bath temperature of from 30°C to 90°C, for a time of from 20 to 40 seconds and at a quantity of electricity of from 100 to 200 C/dm<sup>2</sup>.

